

## REMARKS

### I. Introduction

In response to the Office Action dated June 14, 2002, no claims have been cancelled, amended, or added. Claims 154-165 remain in the application. Re-examination and re-consideration of the application is requested.

### II. Statutory Double Patenting Rejection

In paragraph (2)-(3), the Office Action rejected claims 154-165 under 35 U.S.C. §101 as claiming the same invention as that of claims 86-95 of prior U.S. Patent No. 5,321,813 under the doctrine of statutory double patenting.

Applicants' attorney respectfully traverses this rejection. Specifically, Applicants' attorney submits that claims 154-165 do not claim the same inventions as claims 86-95 of prior U.S. Patent No. 5,321,813.

In this regard, M.P.E.P §804 states the following:

In determining whether a statutory basis for a double patenting rejection exists, the question to be asked is: Is the same invention being claimed twice? 35 U.S.C. 101 prevents two patents from issuing on the same invention. "Same invention" means identical subject matter. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1984); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).

A reliable test for double patenting under 35 U.S.C. 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. For example, the invention defined by a claim reciting a compound having a "halogen" substituent is not identical to or substantively the same as a claim reciting the same compound except having a "chlorine" substituent in place of the halogen because "halogen" is broader than "chlorine." On the other hand, claims may be differently worded and still define the same invention. Thus, a claim reciting a widget having a length of "36 inches" defines the same invention as a claim reciting the same widget having a length of "3 feet."

With regard to the claims of the present invention, it can be seen that identical subject matter is not being claimed. For the purposes of comparison, claims 86-95 of prior U.S. Patent No. 5,321,813 are reproduced below:

86. A system for concurrently transferring messages between different ports, comprising:

(a) a plurality of switch nodes, each switch node comprising a first plurality of input ports, a second plurality of output ports, and means for selectively connecting said input ports to said output ports; and

(b) means for connecting the switch nodes together in a multistage interconnect network, the means for connecting comprising forward channel and back channel signal paths; and

(c) multicast means, operative within the network, for transmitting forward channel messages from a source to one or more destinations; and

(d) back channel merge means, within each switch node, for combining back channel replies received from the destinations into a single result, wherein the result is transmitted on the back channel to the source.

87. The system of claim 86, wherein the multicast means comprises means for steering a multicast request for a supercluster to a bounce back point within the network means, wherein all multicast requests to the supercluster use the same bounce back point.

88. The system of claim 87, wherein the means for steering comprises means for steering a multicast request from one supercluster to a destination supercluster through a bounce back point for the destination supercluster.

89. The system of claim 86, wherein the multicast means comprises means for permitting only one multicast message at a time within a supercluster thereby preventing deadlock between competing multicast requests.

90. A method for concurrently transferring messages between different ports of multistage interconnect network, the network comprising a plurality of switch nodes, each switch node comprising a first plurality of input ports, a second plurality of output ports, and means for selectively connecting said input ports to said output ports, the switch nodes connected together via forward channel and back channel signal paths connected to every input and output port, the method comprising the steps of:

(a) transmitting forward channel messages from a source to one or more destinations; and

(b) combining back channel replies received from the destinations into a single result, wherein the result is transmitted on the back channel to the source.

91. The method of claim 90, wherein the transmitting step comprises steering a multicast request for a supercluster to a bounce back point within the network means, wherein all multicast requests to the supercluster use the same bounce back point.

92. The method of claim 91, wherein the steering step comprises steering a multicast request from one supercluster to a destination supercluster through a bounce back point for the destination supercluster.

93. The method of claim 90, wherein the transmitting step comprises permitting only one multicast message at a time within a supercluster, thereby preventing deadlock between competing multicast requests.

94. A system for concurrently transferring messages, comprising:

- (a) a multistage interconnect network comprising a plurality of interconnected active logic switch nodes;
- (b) each switch node comprising a first plurality of input ports, a second plurality of output ports, and means for selectively connecting said input ports to said output ports;
- (c) the multistage interconnect network comprising more than  $\log_{\text{sub}.b} N$  stages of switch nodes, wherein  $b$  is a total number of switch node input/output ports,  $N$  is a total number of network input/output ports, and  $\log_{\text{sub}.b} N$  indicates a ceiling function providing the smallest integer not less than  $\log_{\text{sub}.b} N$ , the multistage interconnect network providing a plurality of paths between any network input port and network output port to enhance fault tolerance and lessen contention; and
- (d) multicast steering means, within each switch node, for routing multicast requests to a specific input port of a specific switch node within the network, so that only one multicast request can occur at a time, thereby preventing deadlock between competing multicast requests.

95. The system of claim 94, further comprising:

- (1) means for storing a reply from each network output port in the back channel; and
- (2) means for collecting replies from the network output ports and for applying the replies to merge means for synchronously combining all of the replies, wherein the replies are sorted as they propagate through the merge means, so that only the reply having the highest priority is transmitted through the system.

For example, comparing claim claim 154 of the present application to the independent claims 86, 90 and 94 of prior U.S. Patent No. 5,321,813, it can be seen that the limitations in claims 86,90 and 94 lack identity with claim 154. Consequently, claims 86,90 and 94 of the prior U.S. Patent No. 5,321,813 could be literally infringed without literally infringing claim 154 in the present application. Similar arguments can be made for the remaining claims of the present application.

### III. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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